

## ABSTRACT

**[0042]** A router receives a packet at an ingress interface. The router classifies the received packet based on at least a first field value contained in the header of the packet. According to the classification of the received packet, the router associates one of the plurality of forwarding tables to the packet. The router then performs a lookup operation in the associated forwarding table according to at least a second field value contained in the header of the packet. Based on the lookup operation, the router determines an egress interface and transmits the received packet from the determined egress interface.